

Listing of Claims:

Claims 1-22 (Canceled).

23. (Currently Amended) ~~An image processing system comprising: a photographing apparatus; and a processing apparatus; wherein the~~

A photographing apparatus comprises comprising:

5 a plurality of light-emitting devices for emitting illumination light having characteristics of spectroscopic distributions varied in at least a visible light range;

an image pick-up optical system which forms a subject image of a subject illuminated by the light-emitting devices;

10 an image pick-up device unit which picks-up the subject image formed by the image pick-up optical system and outputs an image signal; and

15 a control unit which controls the photographing apparatus to capture images in one of a spectroscopic image capturing mode and a moving image capturing mode, selectively,

wherein in the spectroscopic image capturing mode, the control unit controls ~~at least a plurality of~~ the plurality of light-emitting devices, which are selected according to the characteristics of the spectroscopic distributions of the light
20 emitting devices, to sequentially light-on, and the control unit

controls the image pick-up device unit to capture sequential spectroscopic still images of the subject simultaneously with the sequential lighting-on of the light-emitting devices; and

wherein in the moving image capture mode, the control unit

25 one of: (i) controls a single specific primary color or a
plurality of specific primary colors of the light-emitting
devices selected from the plurality of light emitting devices to

sequentially or simultaneously light-on, and controls the image
pick-up device unit to capture a moving image while the specific
30 primary color of the light-emitting devices are lighted-on, and

(ii) controls a plurality of groups of the light-emitting devices
to sequentially light-on group by group, ~~each of~~ the groups
including a group of the light-emitting devices that belong to

blue in the visible light range, a group of the light-emitting
35 devices that belong to green in the visible light range, and a
group of the light-emitting devices that belong to red in the

visible light range ~~at least one of the light-emitting devices~~
~~and the characteristics of the spectral distributions of each of~~
~~the groups being different,~~ and controls the image pick-up device

40 unit to capture a moving image while the groups of the light-
emitting devices are sequentially lighted-on ; ~~and wherein the~~

~~processing apparatus comprises a calculating unit which performs~~
~~an image calculation based on an output of the image pick-up~~
device.

Claims 24 and 25 (Canceled).

26. (Currently Amended) The ~~image processing system~~
~~according to claim 23, wherein the~~ photographing apparatus of
claim 23, further ~~comprises~~ comprising:

5 a photographing operating unit which inputs at least an
instruction for starting a spectroscopic image photographing
operation to capture the spectroscopic still images of the
subject in the spectroscopic image capturing mode.

Claims 27 and 28 (Canceled).

29. (Currently Amended) The ~~image processing system~~
photographing apparatus according to claim 26, wherein the
photographing operating unit includes a pressing button switch,
and the control unit switches between the spectroscopic image
5 capturing mode and the moving image capturing mode in accordance
with pressing of the button switch.

30. (Currently Amended) The ~~image processing system~~
photographing apparatus according to claim 23, wherein the image
pick-up device unit comprises a color image pick-up device having
a color filter array.

31. (Currently Amended) The ~~image processing system~~
photographing apparatus according to claim 30, wherein at least
one of the plurality of light-emitting devices has a
characteristic of spectroscopic distribution extending between
different bands of the color filter array.

32. (Currently Amended) The ~~image processing system~~
photographing apparatus according to claim 23, ~~wherein the~~
~~photographing apparatus~~ further ~~comprises~~ comprising:

a spectrum sensor which senses the characteristics of the
spectroscopic distributions of the light-emitting devices.

33. (Currently Amended) The ~~image processing system~~
photographing apparatus according to claim 23, ~~wherein the~~
~~photographing apparatus~~ further ~~comprises~~ comprising:

a spectrum sensor which senses a characteristic of
spectroscopic distribution of ambient light.

34. (Currently Amended) The ~~image processing system~~
photographing apparatus according to claim 23, ~~wherein the~~
~~photographing apparatus~~ further ~~comprises~~ comprising:

a display section for displaying an image based on the image
signal outputted from the image pick-up device unit.

35. (Currently Amended) The ~~image processing system~~
photographing apparatus according to claim 23, ~~wherein the~~
~~photographing apparatus~~ further ~~comprises~~ comprising:

an abutting portion which is abutted to the subject at one
end of the photographing apparatus.

36. (Currently Amended) The ~~image processing system~~
photographing apparatus according to claim 35, wherein the
abutting portion comprises a flexible material with a cylindrical
shape.

37. (Currently Amended) The ~~image processing system~~
photographing apparatus according to claim 35, wherein the
abutting portion comprises a material which prevents or reduces
influence of ambient light.

38. (Currently Amended) The ~~image processing system~~
photographing apparatus according to claim 35, wherein the
abutting portion is detachably coupled to a casing of the
photographing apparatus.

Claims 39-41 (Canceled).

42. (New) An image processing system comprising:

a photographing apparatus; and

a processing apparatus;

wherein the photographing apparatus comprises:

5 a plurality of light-emitting devices for emitting
illumination light having characteristics of spectroscopic
distributions varied in at least a visible light range;

 an image pick-up optical system which forms a subject
image of a subject illuminated by the light-emitting devices;

10 an image pick-up device unit which picks-up the subject
image formed by the image pick-up optical system and outputs an
image signal; and

 a control unit which controls the photographing
apparatus to capture images in one of a spectroscopic image
15 capturing mode and a moving image capturing mode, selectively,

 wherein in the spectroscopic image capturing mode, the
control unit controls the plurality of light-emitting devices,
which are selected according to the characteristics of the
spectroscopic distributions of the light emitting devices, to
20 sequentially light-on, and the control unit controls the image
pick-up device unit to capture sequential spectroscopic still
images of the subject simultaneously with the sequential
lighting-on of the light-emitting devices; and

wherein in the moving image capture mode, the control
unit one of: (i) controls a single specific primary color or a
plurality of specific primary colors of the light-emitting
devices selected from the plurality of light emitting devices to
sequentially or simultaneously light-on, and controls the image
pick-up device unit to capture a moving image while the specific
primary color of the light-emitting devices are lighted-on, and
(ii) controls a plurality of groups of the light-emitting devices
to sequentially light-on group by group, the groups including a
group of the light-emitting devices that belong to blue in the
visible light range, a group of the light-emitting devices that
belong to green in the visible light range, and a group of the
light-emitting devices that belong to red in the visible light
range, and controls the image pick-up device unit to capture a
moving image while the groups of the light-emitting devices are
sequentially lighted-on; and

wherein the processing apparatus comprises a calculating
unit which performs an image calculation based on an output of
the image pick-up device.

43. (New) The image processing system according to
claim 42, wherein the calculating unit comprises a color-
reproduction calculating unit for calculating image data for
displaying an image of the subject which is color-reproduced

5 based on the spectroscopic still images photographed by the
photographing apparatus.

44. (New) The image processing system according to
claim 43, wherein the calculating unit further comprises an input
profile calculating unit for generating an input profile using at
least one of the characteristics of spectroscopic distributions
5 of the light-emitting devices, and characteristic data of the
image pick-up optical system and the image pick-up device unit,
and

wherein the color-reproduction calculating unit comprises an
XYZ estimation calculating unit for generating image data of XYZ
10 tristimulus values from the spectroscopic still images using the
input profile and a color matching function.

45. (New) The image processing system according to
claim 42, wherein the calculating unit further comprises an image
determination calculating unit which determines or analyzes the
subject based on the spectroscopic still images and outputs a
result of the determining or analyzing.